

## PEND OREILLE RIVER BASIN

1

## 12398550 BOUNDARY DAM RESERVOIR NEAR METALINE FALLS, WA

LOCATION.--Lat 48°59'20", long 117°20'55", in NE  $\frac{1}{4}$  sec.10, T.40 N., R.43 E., Pend Oreille County, Hydrologica Unit 17010216, at Boundary Dam 1.0 mi upstream from international boundary, 8.8 mi north of Metaline Falls and at mile 17.

DRAINAGE AREA.--25,200 mi<sup>2</sup>, approximately.

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1999 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 1999 to current year.

TOTAL DISSOLVED GAS: April 1999 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1999.

REMARKS.--Temperature record rated excellent except June 18-22, which were rated good and partial days Oct. 7, 13, 27, 28, May 15 and 19, which were rated fair. Total dissolved gas record rated good except partial days (Oct. 13 and May 19), which were rated fair.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum recorded, 24.0°C (rounded) on several days during August, 2000, but may have been higher during periods of missing record; minimum recorded, 0.0°C Dec. 21-29, 2001, but may have occurred during periods of missing winter record.

TOTAL DISSOLVED GAS: Maximum recorded, 132 percent June 15, 1999; minimum 92 percent, Dec. 28, 2000, but may have been lower during periods of missing record.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.8°C on Aug. 26; minimum, 0.0°C Dec. 21-29.

TOTAL DISSOLVED GAS: Maximum, 114 percent, May 19, but may have been higher during periods of missing record; minimum, 92 percent, Dec. 28, but may have been lower during periods of missing record.

## PRESSURE, TOTAL PARTIAL, DISSOLVED GASES, WATER, UNFILTERED, PERCENT SATURATION, WATER YEAR OCTOBER 2000 T

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | 101     | 100 | 101  | ---      | --- | ---  | 96       | 97  | 97   | 95      | 94  | 94   |
| 2     | 100     | 99  | 100  | ---      | --- | ---  | 97       | 97  | 97   | 96      | 95  | 95   |
| 3     | 99      | 98  | 99   | ---      | --- | ---  | 97       | 97  | 97   | 96      | 96  | 96   |
| 4     | 99      | 98  | 98   | ---      | --- | ---  | 97       | 97  | 97   | 97      | 97  | 97   |
| 5     | 98      | 97  | 98   | ---      | --- | ---  | 97       | 97  | 97   | 97      | 98  | 98   |
| 6     | 98      | 98  | 98   | ---      | --- | ---  | 97       | 97  | 97   | 97      | 97  | 97   |
| 7     | ---     | --- | ---  | ---      | --- | ---  | 97       | 97  | 97   | 97      | 98  | 97   |
| 8     | 99      | 99  | 99   | ---      | --- | ---  | 97       | 98  | 98   | 98      | 98  | 98   |
| 9     | 100     | 99  | 100  | ---      | --- | ---  | 98       | 98  | 98   | 98      | 99  | 98   |
| 10    | 101     | 100 | 100  | ---      | --- | ---  | 97       | 98  | 98   | 98      | 99  | 98   |
| 11    | 100     | 99  | 99   | ---      | --- | ---  | 97       | 97  | 97   | 98      | 98  | 98   |
| 12    | 99      | 99  | 99   | ---      | --- | ---  | 97       | 97  | 97   | 98      | 98  | 98   |
| 13    | 100     | 98  | 99   | ---      | --- | ---  | 97       | 97  | 97   | 98      | 97  | 97   |
| 14    | 99      | 99  | 99   | ---      | --- | ---  | 97       | 98  | 97   | 97      | 97  | 97   |
| 15    | 99      | 99  | 99   | ---      | --- | ---  | 94       | 98  | 96   | 96      | 96  | 96   |
| 16    | 99      | 99  | 99   | 94       | 95  | 95   | 94       | 96  | 95   | 96      | 96  | 96   |
| 17    | 99      | 99  | 99   | 94       | 94  | 94   | 93       | 95  | 94   | 96      | 96  | 96   |
| 18    | 99      | 99  | 99   | 94       | 94  | 94   | 93       | 94  | 93   | 96      | 96  | 96   |
| 19    | 98      | 98  | 98   | 94       | 94  | 94   | 94       | 95  | 95   | 97      | 96  | 96   |
| 20    | 99      | 99  | 99   | 95       | 95  | 95   | 94       | 94  | 94   | 97      | 97  | 96   |
| 21    | 98      | 99  | 99   | 95       | 95  | 95   | 95       | 96  | 95   | 97      | 97  | 97   |
| 22    | 97      | 97  | 97   | 95       | 96  | 95   | 95       | 95  | 95   | 96      | 97  | 96   |
| 23    | 97      | 97  | 97   | 95       | 96  | 96   | 95       | 95  | 95   | 97      | 97  | 97   |
| 24    | 98      | 98  | 98   | 95       | 96  | 95   | 94       | 95  | 95   | 97      | 98  | 98   |
| 25    | 98      | 98  | 98   | 96       | 96  | 96   | 94       | 94  | 94   | 97      | 98  | 98   |
| 26    | 98      | 99  | 99   | 96       | 97  | 96   | 94       | 95  | 94   | 97      | 97  | 97   |
| 27    | ---     | --- | ---  | 96       | 97  | 96   | 94       | 94  | 94   | 97      | 97  | 97   |
| 28    | ---     | --- | ---  | 96       | 96  | 96   | 93       | 92  | 93   | 97      | 98  | 98   |
| 29    | 101     | 101 | 101  | 97       | 97  | 97   | 92       | 93  | 92   | 97      | 98  | 98   |
| 30    | 101     | 98  | 100  | 96       | 97  | 96   | 93       | 93  | 93   | 97      | 97  | 97   |
| 31    | ---     | --- | ---  | ---      | --- | ---  | 94       | 94  | 94   | 97      | 97  | 97   |
| MONTH | 101     | 97  | 99   | 97       | 94  | 95   | 98       | 92  | 96   | 98      | 94  | 97   |

PEND OREILLE RIVER BASIN

12398550 BOUNDARY DAM RESERVOIR NEAR METALINE FALLS, WA--Continued

PRESSURE, TOTAL PARTIAL, DISSOLVED GASSES, WATER, UNFILTERED, PERCENT SATURATION, WATER YEAR OCTOBER 2000 T

## PEND OREILLE RIVER BASIN

12398550 BOUNDARY DAM RESERVOIR NEAR METALINE FALLS, WA--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

| DAY   | MAX      | MIN  | MEAN | MAX      | MIN | MEAN | MAX      | MIN  | MEAN | MAX     | MIN  | MEAN |
|-------|----------|------|------|----------|-----|------|----------|------|------|---------|------|------|
|       | OCTOBER  |      |      | NOVEMBER |     |      | DECEMBER |      |      | JANUARY |      |      |
| 1     | 14.7     | 14.5 | 14.6 | 10.0     | 9.7 | 9.8  | 2.6      | 2.5  | 2.5  | .8      | .6   | .7   |
| 2     | 14.7     | 14.4 | 14.6 | 9.7      | 9.4 | 9.6  | 2.7      | 2.5  | 2.6  | .8      | .6   | .7   |
| 3     | 14.5     | 13.9 | 14.2 | 9.4      | 9.1 | 9.3  | 2.7      | 2.6  | 2.7  | .7      | .7   | .7   |
| 4     | 14.1     | 13.6 | 13.8 | 9.1      | 9.0 | 9.1  | 2.7      | 2.3  | 2.5  | .9      | .7   | .8   |
| 5     | 13.6     | 13.4 | 13.5 | 9.0      | 8.9 | 9.0  | 2.3      | 2.2  | 2.3  | 1.3     | .9   | 1.1  |
| 6     | 13.4     | 13.1 | 13.3 | 8.9      | 8.7 | 8.8  | 2.4      | 2.2  | 2.3  | 1.7     | 1.2  | 1.4  |
| 7     | 13.2     | 12.9 | 13.1 | 8.7      | 8.4 | 8.6  | 2.6      | 2.3  | 2.5  | 1.9     | 1.4  | 1.7  |
| 8     | 13.0     | 12.7 | 12.9 | 8.4      | 8.1 | 8.3  | 2.8      | 2.3  | 2.6  | 2.0     | 1.8  | 1.9  |
| 9     | 12.7     | 12.4 | 12.6 | 8.1      | 7.8 | 8.0  | 2.9      | 2.7  | 2.9  | 2.0     | 1.7  | 1.9  |
| 10    | 12.5     | 12.3 | 12.4 | 7.8      | 7.5 | 7.7  | 3.0      | 2.8  | 2.9  | 1.8     | 1.6  | 1.7  |
| 11    | 12.5     | 12.3 | 12.4 | 7.5      | 7.0 | 7.3  | 2.9      | 2.5  | 2.7  | 1.7     | 1.6  | 1.7  |
| 12    | 12.5     | 12.3 | 12.3 | 7.0      | 6.5 | 6.8  | 2.5      | 1.9  | 2.2  | 1.7     | 1.5  | 1.6  |
| 13    | 12.4     | 12.2 | 12.3 | 6.5      | 6.2 | 6.4  | 2.0      | 1.6  | 1.7  | 1.5     | 1.4  | 1.4  |
| 14    | 12.3     | 12.2 | 12.2 | 6.2      | 5.9 | 6.1  | 1.6      | 1.2  | 1.4  | 1.5     | 1.4  | 1.4  |
| 15    | 12.2     | 12.0 | 12.1 | 6.0      | 5.7 | 5.8  | 1.3      | .9   | 1.1  | 1.5     | 1.4  | 1.5  |
| 16    | 12.1     | 11.8 | 11.9 | 5.7      | 5.3 | 5.5  | 1.0      | .8   | .8   | 1.6     | 1.5  | 1.5  |
| 17    | 12.0     | 11.6 | 11.8 | 5.4      | 5.0 | 5.2  | .8       | .6   | .7   | 1.5     | 1.4  | 1.5  |
| 18    | 11.6     | 11.4 | 11.6 | 5.1      | 4.7 | 4.9  | .7       | .3   | .5   | 1.4     | 1.3  | 1.4  |
| 19    | 11.7     | 11.4 | 11.5 | 4.8      | 4.3 | 4.5  | .4       | .2   | .3   | 1.4     | 1.3  | 1.4  |
| 20    | 11.5     | 11.4 | 11.4 | 4.3      | 3.7 | 4.0  | .2       | .1   | .1   | 1.3     | 1.1  | 1.2  |
| 21    | 11.7     | 11.4 | 11.5 | 3.9      | 3.3 | 3.6  | .1       | .0   | .0   | 1.1     | .9   | 1.0  |
| 22    | 11.6     | 11.5 | 11.6 | 3.4      | 3.0 | 3.1  | .0       | .0   | .0   | 1.0     | 1.0  | 1.0  |
| 23    | 11.5     | 11.3 | 11.4 | 3.0      | 2.7 | 2.8  | .0       | .0   | .0   | 1.0     | 1.0  | 1.0  |
| 24    | 11.3     | 11.0 | 11.2 | 2.9      | 2.8 | 2.8  | .0       | .0   | .0   | 1.0     | .9   | 1.0  |
| 25    | 11.0     | 10.8 | 10.9 | 2.9      | 2.8 | 2.9  | .0       | .0   | .0   | 1.0     | .9   | .9   |
| 26    | 10.8     | 10.6 | 10.7 | 2.9      | 2.8 | 2.9  | .0       | .0   | .0   | .9      | .8   | .9   |
| 27    | 10.6     | 10.4 | 10.5 | 2.9      | 2.7 | 2.8  | .0       | .0   | .0   | .9      | .9   | .9   |
| 28    | 10.4     | 10.2 | 10.4 | 2.8      | 2.5 | 2.6  | .0       | .0   | .0   | 1.0     | .9   | 1.0  |
| 29    | 10.3     | 10.2 | 10.2 | 2.5      | 2.3 | 2.5  | .2       | .0   | .1   | 1.0     | .9   | 1.0  |
| 30    | 10.2     | 10.1 | 10.2 | 2.5      | 2.4 | 2.5  | .6       | .2   | .3   | 1.1     | 1.0  | 1.1  |
| 31    | 10.1     | 10.0 | 10.1 | ---      | --- | ---  | .8       | .5   | .6   | 1.2     | 1.0  | 1.2  |
| MONTH | 14.7     | 10.0 | 12.0 | 10.0     | 2.3 | 5.8  | 3.0      | .0   | 1.2  | 2.0     | .6   | 1.2  |
| DAY   | MAX      | MIN  | MEAN | MAX      | MIN | MEAN | MAX      | MIN  | MEAN | MAX     | MIN  | MEAN |
|       | FEBRUARY |      |      | MARCH    |     |      | APRIL    |      |      | MAY     |      |      |
| 1     | 1.3      | 1.2  | 1.3  | 1.4      | 1.2 | 1.3  | 6.4      | 6.3  | 6.4  | 10.4    | 9.9  | 10.2 |
| 2     | 1.3      | 1.2  | 1.3  | 1.4      | 1.3 | 1.3  | 6.5      | 6.2  | 6.3  | 10.0    | 9.5  | 9.7  |
| 3     | 1.4      | 1.3  | 1.3  | 1.5      | 1.3 | 1.4  | 6.4      | 6.2  | 6.3  | 9.8     | 9.3  | 9.5  |
| 4     | 1.4      | 1.2  | 1.3  | 1.6      | 1.4 | 1.5  | 6.8      | 6.2  | 6.3  | 9.9     | 9.3  | 9.6  |
| 5     | 1.3      | 1.2  | 1.2  | 1.6      | 1.5 | 1.5  | 6.6      | 6.2  | 6.3  | 10.1    | 9.9  | 10.0 |
| 6     | 1.2      | 1.0  | 1.1  | 1.7      | 1.5 | 1.6  | 6.3      | 6.1  | 6.2  | 10.0    | 9.7  | 9.9  |
| 7     | 1.0      | .9   | 1.0  | 1.8      | 1.6 | 1.7  | 6.6      | 6.2  | 6.2  | 10.5    | 9.6  | 9.9  |
| 8     | 1.0      | .9   | 1.0  | 1.9      | 1.7 | 1.8  | 6.3      | 6.2  | 6.2  | 10.3    | 9.8  | 10.0 |
| 9     | .9       | .8   | .9   | 2.0      | 1.9 | 1.9  | 6.3      | 6.2  | 6.2  | 10.6    | 10.0 | 10.2 |
| 10    | .9       | .8   | .8   | 2.2      | 1.9 | 2.0  | 6.6      | 6.2  | 6.4  | 11.0    | 10.3 | 10.7 |
| 11    | .8       | .7   | .7   | 2.3      | 2.0 | 2.1  | 6.6      | 6.3  | 6.4  | 11.4    | 10.9 | 11.1 |
| 12    | .7       | .6   | .7   | 2.5      | 2.2 | 2.4  | 6.7      | 6.3  | 6.4  | 12.1    | 11.3 | 11.6 |
| 13    | .6       | .5   | .6   | 2.6      | 2.4 | 2.5  | 6.4      | 6.2  | 6.3  | 12.3    | 11.8 | 12.0 |
| 14    | .6       | .4   | .5   | 2.9      | 2.5 | 2.7  | 7.0      | 6.2  | 6.4  | 12.4    | 12.3 | 12.3 |
| 15    | .4       | .3   | .4   | 3.2      | 2.8 | 3.0  | 6.7      | 6.2  | 6.3  | 12.3    | 12.1 | 12.2 |
| 16    | .3       | .2   | .3   | 3.5      | 3.1 | 3.3  | 7.2      | 6.2  | 6.5  | ---     | ---  | ---  |
| 17    | .3       | .3   | .3   | 4.0      | 3.3 | 3.6  | 6.7      | 6.3  | 6.5  | ---     | ---  | ---  |
| 18    | .4       | .3   | .3   | 4.3      | 3.9 | 4.1  | 6.8      | 6.5  | 6.7  | ---     | ---  | ---  |
| 19    | .4       | .4   | .4   | 4.7      | 4.3 | 4.5  | 7.5      | 6.8  | 7.1  | 12.2    | 11.7 | 12.0 |
| 20    | .4       | .4   | .4   | 4.9      | 4.5 | 4.7  | 7.9      | 7.3  | 7.5  | 12.0    | 11.5 | 11.8 |
| 21    | .5       | .4   | .4   | 5.6      | 4.8 | 4.9  | 8.2      | 7.6  | 7.8  | 11.7    | 11.4 | 11.6 |
| 22    | .6       | .4   | .5   | 5.1      | 4.8 | 4.9  | 8.4      | 7.9  | 8.1  | 12.8    | 11.6 | 11.9 |
| 23    | .8       | .5   | .6   | 5.8      | 4.9 | 5.1  | 8.2      | 8.1  | 8.2  | 12.8    | 11.9 | 12.3 |
| 24    | .9       | .5   | .7   | 5.6      | 5.1 | 5.2  | 8.7      | 8.2  | 8.4  | 13.3    | 12.4 | 12.9 |
| 25    | 1.0      | .7   | .8   | 5.4      | 5.2 | 5.3  | 9.1      | 8.4  | 8.6  | 13.9    | 13.2 | 13.6 |
| 26    | 1.1      | .8   | 1.0  | 5.7      | 5.3 | 5.5  | 9.4      | 8.6  | 8.8  | 14.7    | 13.9 | 14.3 |
| 27    | 1.2      | .9   | 1.1  | 5.9      | 5.6 | 5.8  | 9.6      | 8.9  | 9.2  | 15.4    | 14.5 | 15.0 |
| 28    | 1.3      | 1.0  | 1.2  | 6.1      | 5.9 | 6.0  | 9.7      | 9.5  | 9.6  | 15.8    | 15.2 | 15.6 |
| 29    | ---      | ---  | ---  | 6.2      | 6.1 | 6.1  | 10.1     | 9.6  | 9.8  | 16.1    | 15.7 | 15.9 |
| 30    | ---      | ---  | ---  | 6.5      | 6.2 | 6.3  | 10.2     | 10.1 | 10.1 | 16.2    | 15.9 | 16.1 |
| 31    | ---      | ---  | ---  | 6.4      | 6.3 | 6.3  | ---      | ---  | ---  | 16.0    | 15.8 | 15.9 |
| MONTH | 1.4      | .2   | .8   | 6.5      | 1.2 | 3.6  | 10.2     | 6.1  | 7.2  | 16.2    | 9.3  | 12.1 |

POND OREILLE RIVER BASIN

12398550 BOUNDARY DAM RESERVOIR NEAR METALINE FALLS, WA--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001